

B. docemspinosis, *B. miyarei*, *B. kapala*, *B. immanis* and *B. peter* (Tso and Mok 1991). These species are distributed in the seas of the United States and Japan.

Even though Cirolanid isopods are cosmopolitan in distribution, many species show high levels of endemism. The members of Cirolanidae are also more important for several other reasons. The family is species-rich and occurs worldwide. This species is common in threatened marine habitats, such as coral reefs and mangrove forests that are under heavy developmental pressure, playing a significant role as food for bottom feeding fishes, predators of other fishes and also as mid-sized invertebrate consumers in the food web.

Of all the Crustacean groups, the isopods are the most diverse in their body form. Isopods have only one pair of uropod. They are extremely diverse in their feeding habits.

These species mainly feed on fishes, sponges, shrimps, nematodes and radiolarians. They also feed on diseased or injured fish. They also attack fishes that have been caught in commercial nets (Briones *et al.* 1991).

The capture of this giant isopod by trawlers operated in the inshore waters of Chennai at a depth of less than 90 m, is of interest. It occurs generally at depths of 300 m, the reason for its occurrence in shallower waters is worth studying.

ACKNOWLEDGEMENTS

We thank Prof. Dr. T. Balasubramanian, Director, Centre of Advanced Study in Marine Biology, Annamalai University for encouragement, the authorities of their university for facilities and CMLRE (DOD), Kochi, for financial support.

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24. A NOTE ON THE CAPTURE OF 'GIANT ISOPOD', *BATHYNOMUS GIGANTEUS* A. MILNE EDWARDS, 1879 OFF MANGALORE COAST, INDIA¹

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¹Accepted December 29, 2006

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Isopods are a large, diverse order with ten named suborders and approximately 10,000 species. They are found in all seas and at all depths, in fresh and brackish waters, and on land. The Giant isopod *Bathynomus giganteus* A. Milne Edwards, 1879 (Richardson 1905) is the largest marine isopod species recorded in the world. It is reported to occur in a wide depth range from 170 to 2,140 m and grows up to 400 mm in length. *Bathynomus giganteus* was found for the first time in 1878 off the coast of Dry Tortugas in the Gulf of Mexico and is reported to have distribution off Gulf of Mexico; Atlantic Ocean; Bay of Bengal and Arabian Sea (Brusca *et al.* 1995).

The *B. giganteus* reported here was caught in a trawl net operated by deep sea trawlers off Mangalore coast from a depth of 150 m on April 07, 2004. Even though the species is reported to have a wide distribution, the incidences of their

capture by fishing vessels from Indian waters are very rare. Earlier records of the species were from Thoothukudi, Tamil Nadu (Srikrishnadhas and Venkatasamy 2003) and Ezhimala, Kannur (Jacob and Narayankutty 2006). This male specimen caught off Mangalore measured 255 mm in length and 103 mm in width.

The body of *Bathynomus giganteus* is divided into three distinct regions: head (cephalon), thorax, and abdomen (pleon); the first segment of the thorax is fused to the head. The remaining seven free segments (pereonites) of the thorax comprise the pereon; each bears a pair of uniramous legs, or pereopods. The pereopods are modified for locomotion and for latching onto the prey. The abdomen primitively consists of five free segments (pleonites) plus a fused 6th pleonite + telson (pleotelson). Each pleonite bears a pair of biramous pleopods, which are used for swimming and for respiration.

They have compound eyes, two pairs of antennae, and four sets of jaws. The first antennae are uniramous and typically chemosensory; the second antennae are typically tactile structures. The sex of the *Bathynomus* species is distinguished by the presence of paired penes on the sternum of 7th pereonite in males and with the presence of a marsupium and opening of oviduct (near the base of the legs on the fifth pereonite) in female. By examination the specimen caught was identified as a male with distinguishable male sexual characters.

B. giganteus are voracious carnivores, functioning both as predators and scavengers by crawling on the silty bottom looking for dead fishes and slow moving animals. The stomach of the specimen was dissected out and examined for

its content. The stomach was empty. It is reported that *B. giganteus* feeds on a variety of food organisms, fishes, sponges, shrimps, copepods, nematodes, radiolarians, and the most important food categories in all life phases was found to be fish and squid remains (Barradas-Ortiz *et al.* 2003). When caught in the net, they tear off meat from the captured fishes.

ACKNOWLEDGEMENT

The authors wish to thank Dr. Patricia Briones-Fourzan, Universidad Nacional Autonoma de Mexico for providing important literature on the species and also for the help in identifying the specimen.

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25. *NONEA CASPICA* (WILLD.) G. DON. (BORAGINACEAE) — A NEW RECORD FOR INDIA¹

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¹Accepted May 05, 2007

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During one of the plant collection visits to village Dholipal, Hanumangarh district, Rajasthan. We collected *Nonea caspica* (Willd.) G. Don. near Indira Gandhi Canal. A perusal of the literature shows that this species has not been reported from India.

This paper records for the first time the occurrence of *Nonea caspica* (Willd.) G. Don. from India. It is known so far from Pakistan (Ali and Nasir 1989). The specimens have been deposited in the Herbarium, Department of Botany, Govt. Dungar College, Bikaner (Rajasthan). The identification of the species is based on FLORA OF PAKISTAN No. 191, Boraginaceae by Ali and Nasir (1989).

Nonea caspica (Willd.) G. Don. Syst. 4: 336. 1838; Riedl in Rich.f., Fl. Iran. 48: 250. 1967; Ali & Nasir, Fl. Pakistan 191: 74. 1989.

Onosma caspica Willd Sp. Pl 1(2): 775 1797; *Nonea picta* (M. Bieb.) Fisch and May., Index sem. Hort. petrop. 43. 1835, *N. nigricans* auct. Fl. or non. DC, 1846 (Fig. 1)

An ascending annual herb (up to 20 cm long), stems

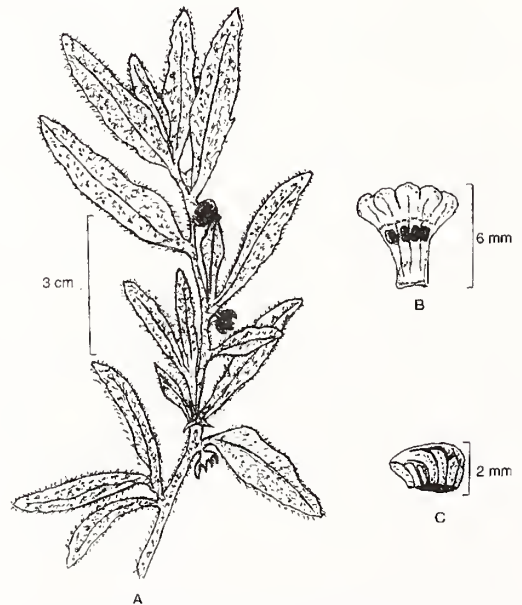


Fig. 1: *Nonea caspica* (Willd.) G. Don. (Boraginaceae)
A. Twig, B. Corolla, C. Seed